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Public Health Nutrition Field Experience with the Chattanooga-Hamilton County, Tennessee, Health Department in 1973

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I am submitting herewith a thesis written by Charlotte Bickford Colvard entitled "Public Health Nutrition Field Experience with the Chattanooga-Hamilton County, Tennessee, Health Department in 1973." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Nutrition.

Daniel Hubbard, Major Professor

We have read this thesis and recommend its acceptance:

Roy Beauchene, Brent Jones

Accepted for the Council:

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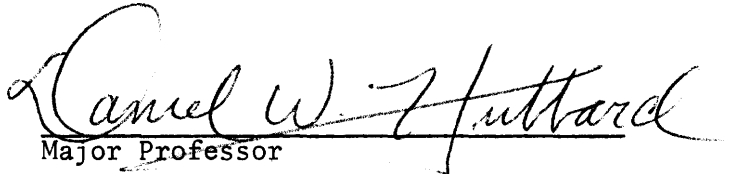
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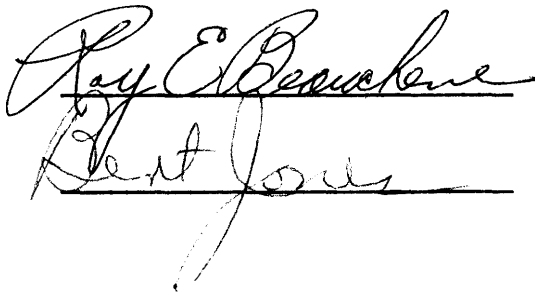
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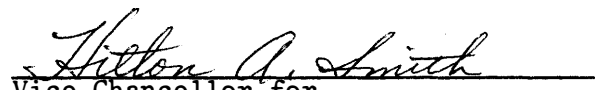
I am submitting herewith a thesis written by Charlotte Bickford Colvard entitled "Public Health Nutrition Field Experience with the Chattanooga-Hamilton County, Tennessee, Health Department in 1973." I recommend that it be accepted for nine quarter hours of credit in partial fulfillment of the requirements for the degree of Master of Science, with a major in Nutrition.


Major Professor

We have read this thesis and
recommend its acceptance:


Kent Jones

Accepted for the Council:


Vice Chancellor for
Graduate Studies and Research

PUBLIC HEALTH NUTRITION FIELD EXPERIENCE WITH THE CHATTANOOGA-
HAMILTON COUNTY, TENNESSEE, HEALTH DEPARTMENT IN 1973

A Thesis
Presented to
the Graduate Council of
The University of Tennessee

In Partial Fulfillment
of the Requirements for the Degree
Master of Science

by
Charlotte Bickford Colvard
August 1973

ACKNOWLEDGMENTS

The student expresses her sincere appreciation to Dr. M. M. Young, Director of the Chattanooga-Hamilton County Health Department and Dr. James M. Foley, Deputy Director, and Jana Jones, Nutrition Consultant of the Chattanooga-Hamilton County Health Department, for their time and thoughtfulness in planning and providing a field experience that has been invaluable to the student's professional and personal development.

Grateful acknowledgment is extended to the student's major professor, Dr. Daniel Hubbard, Department of Nutrition, The University of Tennessee, for his guidance and help in preparing this report. Appreciation is also given to Dr. Roy Beauchene, Department of Nutrition, and Dr. B. L. Jones, Department of Public Health Education, for their support.

A very special acknowledgment to the student's husband, Laney, to the student's parents, Mr. and Mrs. John Lee Bickford, and to the student's sister, brother-in-law, and family, Mr. and Mrs. Richard E. Carmack, Richard, Jennifer, and Jeffery for their interest and support.

C. B. C.

ABSTRACT

This thesis describes and analyzes the student's seven weeks of field training within the Nutrition Service of the Chattanooga-Hamilton County Health Department. This experience provided the student with appropriate background experience for her future role as a public health nutritionist.

The field experience gives the student in public health nutrition an opportunity to work with allied health personnel under supervision and to apply the theories and principles of public health learned during the academic year to the practice of public health nutrition in the community. The experience was designed to strengthen the student's philosophy and practical understanding of public health by introducing her to the practice of public health in the official health agency and the community. It provides a better understanding of the role of nutrition in the health agency, with a practical application to individuals and families. Experiences in a consultant capacity with other agencies was also offered. The student was given the opportunity to develop both her professional and personal abilities in carrying out applied nutrition programs in the health agency with community groups. Assignment to a specific area of the county provided responsibility similar to that of a new nutrition staff member in a county setting.

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CHAPTER I

INTRODUCTION

The demand for health service has increased. Health care in the United States has come to be regarded as a human right of every individual, and not merely a privileged few. Three million men and women, comprising 4 percent of the total labor forces in the United States, were employed in health services in 1964 (1). By 1975, there will be a need for more than five million people to be employed in health occupations (2).

To help meet the manpower shortage in the health delivery system, The University of Tennessee is training public health nutritionists. One portion of this training is field experience in a public health agency which gives the student an opportunity to work with allied health personnel and to apply the theories and principles learned during the academic year to the practice of public health nutrition in the community.

The objectives of the seven weeks' supervised field experience were:

1. To study the ecology of the community as it relates to the health and nutritional needs and to observe the role of the nutrition consultant in meeting these needs.
2. To observe the interrelationship between the official health agency and the coordination of nutrition services between agencies having a nutrition component.
3. To gain insight into the intricacies of administration of a public health program.

4. To develop ability and confidence to carry responsibilities and to function as a nutritionist through participating in nutrition activities and services.

This report of the field experience is divided into four chapters. Chapter I is an introduction. Chapter II is an analysis of the factors which determine the programs and policies of the Chattanooga-Hamilton County Health Department including the services of the health department and the health department services in relation to nutrition. Chapter III is an analysis of the student's own performance. Chapter IV is a summary of the student's learning experience in relation to her academic background, past experience, and the objectives for the field training.

CHAPTER II

FACTORS WHICH DETERMINE THE POLICIES AND PROGRAMS OF THE CHATTANOOGA-HAMILTON COUNTY HEALTH DEPARTMENT

The public health needs of a community are based on the individual characteristics of that community. In order to assess the needs of a community and plan public health programs to fit these needs certain characteristics must be studied. Part I of this chapter examines resources and population of Hamilton County; part II looks at the nature of public health; and part III emphasizes the nutrition component of the health problems and programs.

I. POPULATION CHARACTERISTICS

Vital and Biostatistics.

Hamilton County, surrounding the city of Chattanooga on the north, east, and west, has become the suburban outgrowth for the city. The population statistics reflect this growth. According to the United States Bureau of the Census, the total population of Hamilton County in 1960 was 237,905. In 1971, the population stood at 258,533 (3). A factor contributing to the growth is the migration of families into the county from the surrounding counties. At the same time the population of the city of Chattanooga has decreased. The percent change in population between the years of 1960 and 1970 was 6.9 percent decrease. During this time the City of Chattanooga had a decrease of 8.4 percent in population. Eleven

areas outside the city had an increase in population. An example of this was Signal Mountain with an increase of 41.8 percent in population from 1960 to 1970 (4).

This increase in population warrants an increase in health services to a wider area to meet the needs of the people. Hamilton County is a metropolitan area; in 1970, 58.9 percent of the population was classified as urban with 41.2 percent classified as rural (4).

The age distribution in Hamilton County as well as the State of Tennessee has implications for county health programs. Table 1 shows the age distribution by percent for the State of Tennessee and Hamilton County for 1970. Since a large percentage of the county population is under fourteen years of age, health programs must consider the preschool child, school age child, the teenager to a greater degree. Even though only 9.7 percent of the population is over 65, the necessity for geriatric components of the programs should not be underestimated (5).

A comparison of the 1970 census figures in respect to ethnic components of Tennessee shows that nonwhites represent 16.1 percent and whites 83.9 percent of the population whereas Hamilton County population is 18.4 percent nonwhite and 81.6 percent white (6).

Table 2 shows fetal, neonatal, and infant death rates for the United States, Tennessee, and Hamilton County. This comparison indicates a great need for prenatal and infant health services in Hamilton County. It becomes even more evident when the statistics are compared for white and nonwhite populations. The data in Table 3 show the nonwhite population of Hamilton County to have a greater problem regarding infant and

TABLE 1
PERCENT OF TOTAL POPULATION BY AGE FOR TENNESSEE
AND HAMILTON COUNTY IN 1970

Age Group	Tennessee %	Hamilton County %
Under 5	8.3	8.1
5-14	19.7	19.4
15-24	17.8	16.8
25-34	12.5	12.7
35-44	11.4	12.3
45-54	11.2	11.6
55-64	9.4	9.6
65 +	9.8	9.7

Source: Population Characteristics for Tennessee 1970 Census of Population, United States Department of Commerce Bureau of the Census. September 1971.

TABLE 2
FETAL, NEONATAL, AND INFANT DEATH RATES FOR UNITED STATES,
TENNESSEE, AND HAMILTON COUNTY 1970

Place	Death Rates ^a		
	Fetal	Neonatal	Infant
United States	NA ^b	14.9	18.8
Tennessee	15.5	16.2	21.3
Hamilton County	16.7	20.4	26.1

^aRates per 1,000 registered live births.

^bNA means not available.

Source: Tennessee Department of Public Health 1970 Tennessee Vital Statistics. Tennessee Department of Public Health, Nashville, Tennessee. United States Department of Health Education and Welfare 1970 Monthly Vital Statistical Report Annual Summary for United States Volume 19, Number 13.

TABLE 3

INFANT AND NEONATAL DEATH RATES BY RACE FOR THE UNITED STATES,
TENNESSEE, AND HAMILTON COUNTY 1970

Place	Mortality Rates ^a			
	Infants		Neonatal	
	White	Nonwhite	White	Nonwhite
United States	17.4	31.4	13.5	21.6
Tennessee	18.7	30.9	14.8	21.6
Hamilton County	20.8	41.6	17.5	28.8

^aRates per 1,000 live births.

Source: Tennessee Department of Public Health 1970 Tennessee Vital Statistics. Monthly Vital Statistics Report Annual Summary for United States 1970 United States Department of Health Education and Welfare. Volume 19, Number 13.

neonatal deaths when those death rates are compared to Tennessee and the United States.

The live birth rate per 1,000 population for Hamilton County increased to 18.8 in 1971, as compared to 16.4 in 1969. There was a decrease in the infant death rate per 1,000 live births from 23.5 in 1969 to 19.9 in 1971. There was also a slight decrease in premature births in 1971 to 81.3 per 1,000 live births as compared to 81.6 in 1969. Illegitimate births per 1,000 live births increased from 136.8 in 1969 to 147.8 in 1971 (3,7).

Table 4 presents a comparison of the ten leading causes of death in the United States, Tennessee, and Hamilton County for 1971. The leading causes of death for Hamilton County reflect the state and national trends of increasing deaths for chronic illnesses. Homicide and suicide are leading causes of death in Hamilton County and Tennessee but are not for the United States. Diabetes mellitus appears on the United States list but is not a leading cause of death in Hamilton County (4,8,9).

Statistics on morbidity indicate a consistent decrease in the incidence of all communicable disease in Hamilton County except venereal disease (9). The threat from venereal diseases is increasing so that current emphasis in communicable disease control is on VD prevention and treatment (10). Diseases of early infancy have decreased from fifth to sixth leading cause of death from 1969 to 1971 in Hamilton County. In 1971, pneumonia ranked fifth while in 1969 it did not rank in the top ten leading causes of death. Diabetes was ranked number seven in 1969 and not ranked in 1971. A new entry for 1971 is cirrhosis of the liver, which ranked number nine. Both suicide and homicide dropped one position in

TABLE 4
COMPARISON OF THE TEN LEADING CAUSES OF DEATH
IN THE UNITED STATES, TENNESSEE,
AND HAMILTON COUNTY 1971

Rank	United States ⁷¹	Tennessee ⁷¹	Hamilton County ⁷¹
1.	Diseases of heart	Diseases of heart	Diseases of heart
2.	Malignant neoplasms	Malignant neoplasms	Malignant neoplasms
3.	Cerebrovascular disease	Cerebrovascular disease	Cerebrovascular disease
4.	Accidents	Accidents	Accidents
5.	Influenza and pneumonia	Influenza and pneumonia	Pneumonia
6.	Diseases of early infancy	Diseases of early infancy	Diseases of early infancy
7.	Diabetes mellitus	Diabetes mellitus	Homicide
8.	Arteriosclerosis	Arteriosclerosis	Emphysema
9.	Cirrhosis of liver	Suicide	Cirrhosis of liver
10.	Bronchitis, emphysema and asthma	Homicide	Suicide

Source: Bureau of the Census 1972 Statistical Abstracts of the United States. U.S. Government Printing Office, Washington, D.C.; Tennessee Department of Public Health, 1971 Tennessee Vital Statistics. Tennessee Department of Public Health, Nashville, Tennessee; and Chattanooga-Hamilton County Health Department 1971 Annual Report. Chattanooga-Hamilton County Health Department, Chattanooga, Tennessee.

the 1971 ranking as compared with the 1969 rankings (3,7). The total death rate for Hamilton County was 9.0 per 1,000 population, which is a decrease from the year 1969 where it was 9.3 per 1,000 (3,7). The death rate for Tennessee in 1969 was 9.9 per 1,000 population and 10.0 in 1971 (7).

Economic and Educational

The site of Chattanooga, always an important transportation center, is at the intersection of several major highways. It has good rail and air service and the nine-foot deep channel of the Tennessee River is navigable all year for barge traffic. Good tourist accommodations combined with the scenic and historic attractions of the area result in a multimillion dollar tourist business for the greater Chattanooga area. Three large insurance companies have home offices in the city (11). Chattanooga is headquarters for the power system of the Tennessee Valley Authority. Over 590 manufacturers in the vicinity employ approximately 52,000 persons. Principal industries are the manufacture of textiles, steam boilers, nuclear reactors, natural gas, electric stoves, plumbing supplies, farm equipment, furniture, paper, glass bottles, ceramic products, cement, beverages, medicine and candy (12).

Hamilton County has a median income of \$9,059 which was higher than that of Tennessee in 1970 (13). Although the county is generally prosperous, large pockets of poverty do exist in the central city area of Chattanooga. The city and county school systems maintain progressive educational programs. School enrollments for 1972 were: public schools, 53,308; parochial schools, 2,947; private schools, 2,692 (11). The

median school year completed in Hamilton County in 1969 was 11.0 years as compared with 9.2 years for the State of Tennessee (13). The University of Tennessee at Chattanooga has a total enrollment of over 6,000.

There are 2,894 hospital beds available for use in the immediate Chattanooga area. Of this total, 1,195 are in public institutions (13).

Government

Chattanooga was incorporated in 1839. It operates under a commission form of government and is governed by a mayor and four commissioners all of whom are elected for four-year terms. Each commissioner serves as the active administrative head of one of the following departments:

Department of Finance and Public Affairs,

Department of Fire and Police,

Department of Public Utilities,

Department of Streets and Sewers,

Department of Health and Education.

In addition to the five administrative departments, the Chattanooga-Hamilton County Health Department is operated jointly by the City and County, with a director and staff appointed for indefinite terms and subject to regulation of the Tennessee State Merit System (13).

In Tennessee the county is an important unit of local government. Hamilton County operates under a council-manager form of government composed of the County Judge, as chairman, and four members, all of whom are elected by popular vote to serve four-year terms. Principal departments of the county government are:

Department of Highways and Public Works,
Department of Auditing, Purchasing and Welfare,
Hamilton County Board of Education,
Hamilton County Juvenile Court,
Board of Trustees, Erlanger and Children's Hospitals.

II. THE NATURE OF PUBLIC HEALTH IN THE CHATTANOOGA- HAMILTON COUNTY HEALTH DEPARTMENT

The statistics and other information presented in the preceding section are helpful in assessing the health needs of the population and in understanding how existing or projected department activities relate to overall needs and services.

Chattanooga was one of twenty-one communities in the nation that conducted area health surveys in 1963. Some of the indicated health needs of the community, based on the survey, included: a facility for confining recalcitrant tubercular patients; facilities, other than jails, for hospitalizing acutely ill mental patients; resident facilities for care of mentally retarded children; and homemaker services. Health personnel that were needed included: a sanitary engineer, a nutritionist, a medical social worker, a physical therapist, a statistician, and a public health veterinarian (14). At present all recommended positions have been filled. The position of nutritionist was established in 1964 and first filled in 1965.

A study was conducted in 1971, by the Health System Consultants of Chapel Hill, North Carolina, upon request of the Chattanooga-Hamilton County Health Department. The findings indicated a need for redistribution

of services to cover the entire county and an in-depth study of existing community services to facilitate the elimination of duplication of services offered by the health department (15).

History and Development.

In 1941, the Hamilton County Health Department and the Chattanooga Health Department merged to become the Chattanooga-Hamilton County Health Department (17). These departments originated in the latter part of the nineteenth century with the appointment of a Registrar of Vital Statistics in 1875 and the appointment of a sanitary officer in 1880. A county board of education was established in 1896, and the first nurse was employed by the city in 1918. A county health department was organized in 1926 (16).

The Chattanooga-Hamilton County Health Department has one central office as shown in Figure 1, with outlying health centers. Figure 2 shows the location of these health centers. The newly remodeled central building was built within a medical complex. The complex consists of the Baroness Erlanger Hospital, the medical center of the area; the Team Evaluation Center, a diagnostic, information, and referral agency for handicapped children; and the Psychiatric Clinic, the community mental facility. Several private physicians' offices are also located within the complex. The location within the medical complex is conducive to promoting comprehensive health care. Increased facilities will be available in the next two years with additional space now being added for regional and local health personnel.

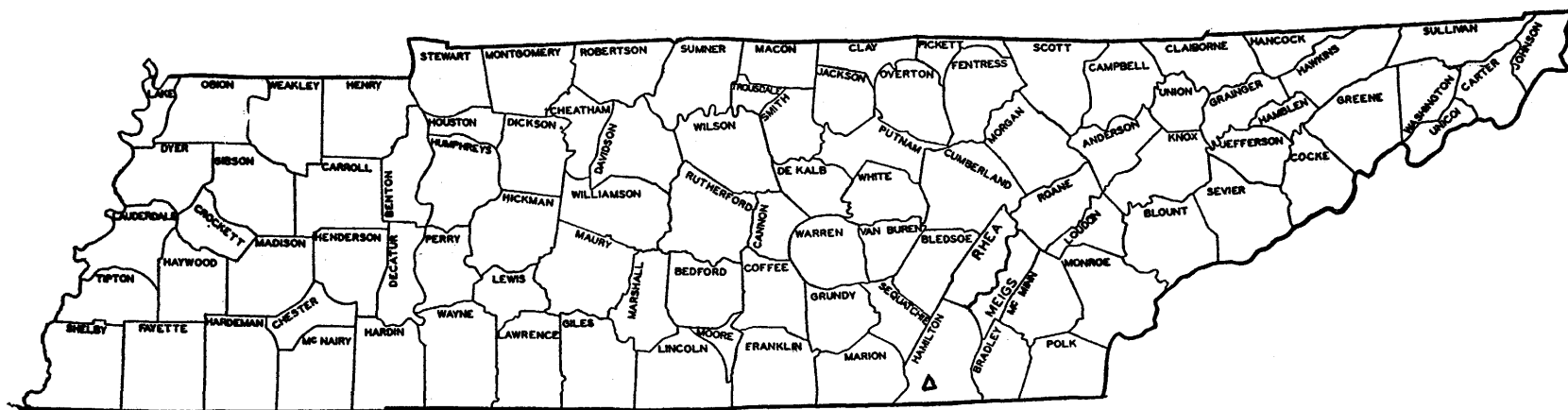


Figure 1. Location of Hamilton County within the State of Tennessee and Chattanooga-Hamilton County Health Department within Hamilton County.

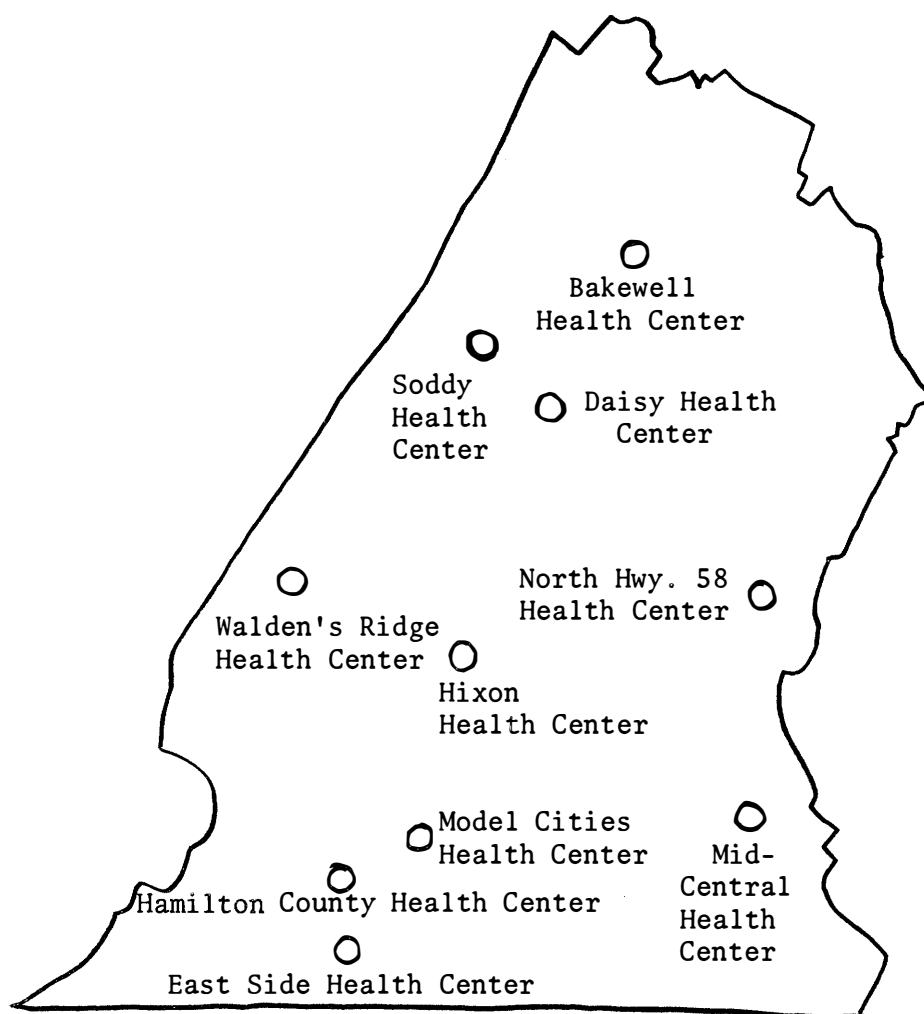


Figure 2. Location of Chattanooga-Hamilton County Health Department Health Centers within Hamilton County, Tennessee.

Organization

The official duties of the County Board of Health as stated in Section 53-301 of the Tennessee Code Annotated are: to govern the local health department's policies; to utilize necessary measures for the management of general health; to restrict the introduction and spread of preventable disease; to execute through the health officer regulations necessary for the control of rabies in the county. If there are contagious diseases in the county, it is the County Board of Health's legal responsibility to report via the Health Officer to the State Commissioner of the Tennessee Department of Public Health (17).

The Chattanooga-Hamilton County Health Department has, in lieu of a board of health, an Advisory Committee. Members of the Chattanooga-Hamilton County Health Department Advisory Committee include the Director, Assistant Director, and three other staff members of the health department; the Mayor of the City of Chattanooga, the Commissioner of Health and Education of the City, and the Hamilton County Judge, acting as ex-officio members. The committee also consists of twenty-four members of the community representing Chattanooga and Hamilton County (3).

Goals

Chattanooga-Hamilton County Health Department goals established for the year of 1973 are the following:

1. To improve the environment in which we live, work, and play.
2. To emphasize the importance of prevention, early detection, and treatment as it relates to health care.
3. To narrow the gap between what people know and practice.
4. To demonstrate quality health care.
5. To aid in the eradication of communicable diseases.

6. To communicate with and educate the community in respect to all facets of health care.
7. To develop effective relationships with other agencies and institutions within the community and promote coordination of efforts.
8. To provide more effective health services through research, development, and evaluation.
9. To collect, analyze, and distribute meaningful data necessary for program planning and evaluation.
10. To enlarge the pool of health manpower.
11. To establish means of financing services (18).

Dr. M. M. Young, Health Director, coordinates a staff of well-trained specialists in the public health field. Physicians, dentists, nurses, health educators, a nutrition consultant, engineers, environmentalists, veterinarians, statisticians, x-ray technicians, laboratory personnel, VD investigators and other specialists staff the five divisions which make up the Chattanooga-Hamilton County Health Department. Figure 3 shows the organizational chart. Environmental Health Services, Communicable Disease Control, Research and Development Health Statistics, Public Health Nursing, Health Educators, Dental Health, and Nutrition are under the direction of the Director of Medical Services along with two other divisions. All divisions along with the Director of Medical Services are responsible to the Deputy Director of Personal Health Services who is directly responsible to the Health Director. Each division is responsible for a variety of programs and services to meet the public health needs of all the people of Chattanooga and Hamilton County.

Division of Communicable Disease Control

Contained within the Division of Communicable Disease Control are the Tuberculosis Control, Venereal Disease Control and other communicable disease programs.

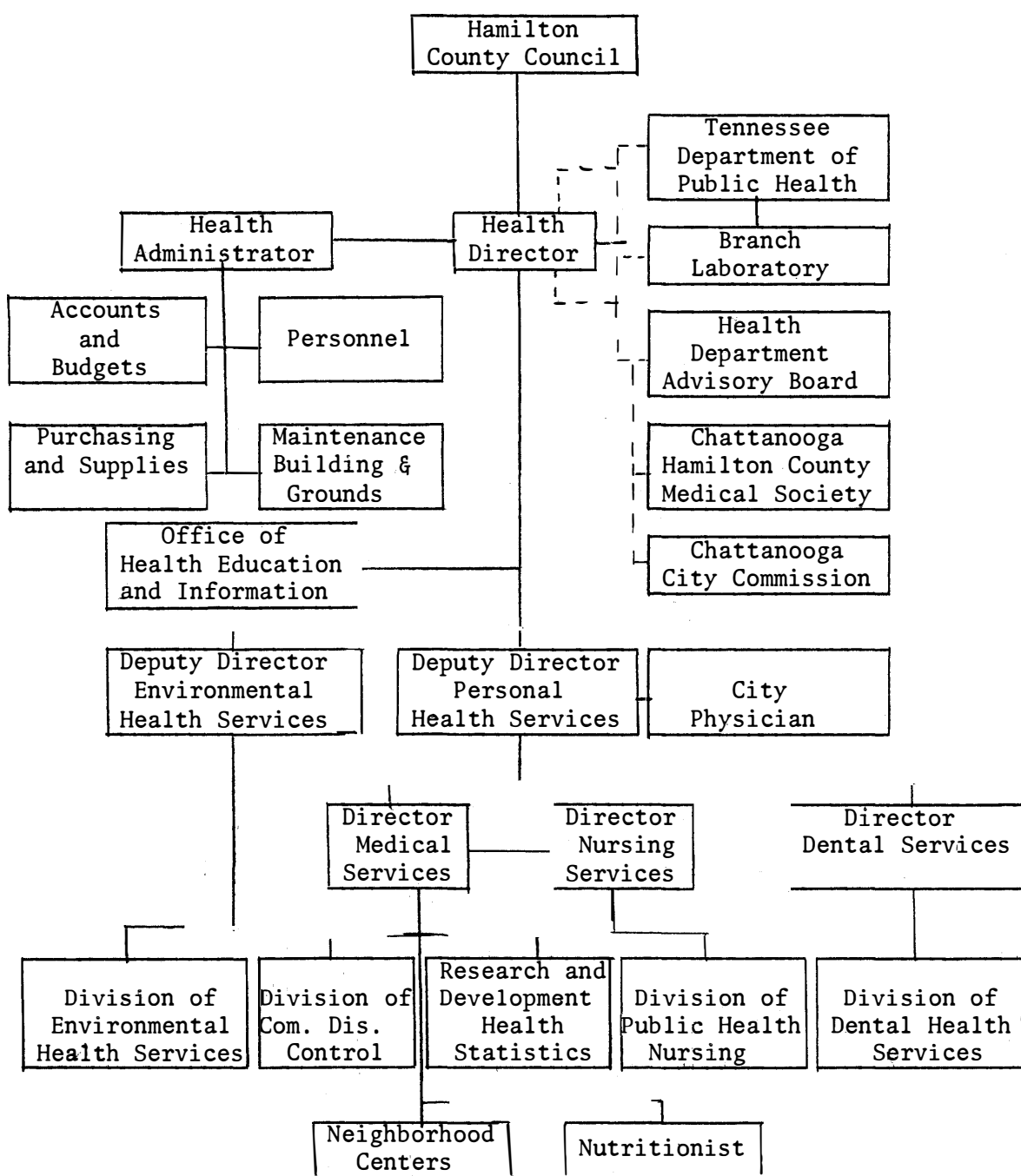


Figure 3. Chattanooga-Hamilton County Health Department organization chart, 1972.

Tuberculosis control. 1968 was the last year that tuberculosis was among the ten leading causes of death in Hamilton County (7). Due to an intensive tuberculosis control program the rate has continued to decrease; however, tuberculosis still requires surveillance in Hamilton County (10). The 1972 objectives for the tuberculosis project were:

1. To reduce the rate of new active cases of tuberculosis to not more than 15 per 100,000 population,
2. To provide skin tests and chest x-rays to 90 percent of the close contacts of the new active cases,
3. At least 75 percent of the active cases diagnosed with positive bacteriological findings be converted to negative status within two to four months,
4. At least 90 percent of all newly diagnosed active cases be under medical treatment,
5. To identify cases of tuberculosis among Hamilton County seventh grade school, and
6. See that necessary medical care is obtained within two months (18).

Venereal disease section. Venereal disease can still cripple and kill. It has also reached an epidemic stage in Hamilton County. The control program is based on finding and treating infected persons, plus investigation of their contacts (18). An extensive education program concerning the nature of the disease is aimed at youth.

Division of Environmental Health

Even before ecology became a popular concern of the public, the health department had a program in environmental health. The basic objectives of the environmental health program are to see that the environment is clean and as safe as possible. The thirteen environmentalists employed by the health department teach principles of sanitation and environmental health and enforce certain regulations pertaining to this area of public health. Some activities of the Division

of Environmental Health include the following: inservice training programs for school cafeteria employees, inspection of subdivisions, sanitary landfills, jails, day care and nurseries, private and parochial kindergarten, private and public high schools and junior high schools, nursing homes and children's homes, and establishment of rabies clinics (18).

Research and Development Health Statistics

Vital Statistics. Vital Statistics provides fundamental data on which to base programs and services. The function of the Vital Statistics Services are development of basic population data, preparation and analysis of rates with regard to public health problems, development and improvement of department records for service statistics, the preparation of statistical reports, evaluation of departmental services and activities, and the development of statistical studies of special health programs.

The service is responsible for collecting data related to births, deaths, population characteristics, and diseases in the county. Certified copies of birth and death records and permits for burial, cremation, and transportation of bodies are issued to authorized persons.

The Vital Statistics Service provides documented data indicative of need and services given in a total public health program.

Public Health Nursing

Public health nurses teach individuals and families good health practices and help them to help themselves. They place major emphasis on the promotion of health and the prevention of disease and disability.

Nursing services are part of many programs. There are 35 registered nurses, 20 licensed practical nurses and 12 nurses aides employed by the health department (19). The staff is divided into five teams and provides services to specific areas of the county according to population, demand of services and priority of the problem. The five nursing teams provide services to areas served by the following health centers: Soddy, Daisy, Hixson, Bakewell, East Side, Model City, North Highway 58, and Mid-Central. The team approach has worked very well because members of the team are familiar with all cases of the assigned area thus can give support to each fellow member.

In the past two years the maternal and child health services provided by the nursing staff had more than doubled as this program had received increased priority (20).

Inservice meetings are a regular part of the nursing program. They keep the staff informed on the most effective methods of patient care and health education.

Division of Dental Health

Dental health is an important part of a person's total well being. The objective of the dental health program is to improve the dental health of the people in Hamilton County. A total of 8,000 patients were seen in the year 1972 (20). Three full-time dentists are employed by the health department and work primarily in preventive dentistry (21). Emphasis is placed upon prevention, education, and correction.

Health Education

Health education is one of the primary activities of the Chattanooga-Hamilton County Health Department. The objectives of the health education program is to present information about health and disease to the people and to motivate them to practice desirable personal and environmental health attitudes and actions. An example of the health educator's motivational skills were demonstrated in the elimination of environmental problems on an intercity residential alley in a poverty area of downtown Chattanooga. For several years Flynn Street had waste disposal occurring in the streets and vacant lots. A health educator discovered the problem, began to gain rapport with this community, and was able to motivate them to clean up their own area.

Health educators coordinate the activities and programs of the department with those of community groups and agencies and serve as a public relations medium. They play an active part in interpreting to the public the specialized health services through mass media. Other activities include distributing health education materials, providing speakers, and keeping the public health materials and publications current and available.

III. NATURE OF NUTRITION SERVICES

The position of nutritionist for the Chattanooga-Hamilton County Health Department was established in 1964 and was first filled in 1965. Prior to this date, all nutrition activities of the health department were conducted by the nurses and the health educators. Since 1965 there

have been several intervals in which the position has been vacant; however, at present the position is filled. A copy of the current job specifications is found in Appendix A.

The philosophy of the nutritionist is to improve the health of the population by improving the nutrition of the population (22). The program for the nutritionist is determined by the needs of the divisions in the health department and of the community for nutrition counseling or education.

Nutrition is an integral part of a well-ordered health program. The nutritionist provides leadership and guidance in the science of nutrition to the health department staff. She attempts to coordinate her program with other divisions of the health department as well as with those of other agencies. Her aim is to promote better nutrition in every possible way, beginning with her own personal example.

Like the goals of all programs of the health department, the goals of the nutrition service follow the main goals of the health department as a whole. To accomplish these goals and to make nutrition a practical part of the overall health program, the nutritionist has proposed nutrition activities to support services of the following divisions: Nursing, Communicable Disease, Dental Health, Environmental Health, Health Education and others as requested.

Overall Activities

New health department staff members must understand the specialized contribution that a nutritionist makes to the public health program in order to utilize her services. New employees of the health department,

student nurses, and other students visiting the health department have a regularly scheduled orientation session with the nutritionist.

Concise, well-developed teaching and illustrative materials are essential because the majority of nutrition services given are of the consultative or educational type. A file of nutrition education visuals and materials is kept by the nutritionist. In addition to the nutrition education material that she has prepared herself, educational materials from other reputable sources are included which have been evaluated for accuracy and appropriate use.

Public Health Nursing

The nutritionist reaches people having many types of problems and in different stages of the life cycle through her work with the public health nurse. The nutritionist reaches those individuals with nutritional problems indirectly through the public health nurse and directly when home visits are made upon request of the nurse or by clinic referrals from any member of the health team.

The nutritionist takes an active part in the nursing inservice educational program. During these programs the nutritionist keeps the nursing staff informed of advances in food and nutrition research, brings new techniques and materials to their attention, and helps the staff share common problems and possible solutions. The nutritionist has one afternoon a week set aside for staff conferences on nutritional problems. She attends other nursing inservice sessions to learn different aspects of the family nursing service for further assistance to the staff.

In the preventive aspects of nutrition the public health nursing program seeks to improve nutrition of expectant mothers and promote better feeding practices through counseling families. In order to improve the health of chronic disease patients, the nutrition consultant assists the medical team with aspects of diet and follow-up activities with the patient and the family.

Outlying Health Centers

Nutritional services are provided at three of the eight outlying health centers. Fifty percent of the nutrition consultant's time is committed to the East Side Health Center. There is limited time to assist other centers. The Health Center at East Side came into being as the public health component of the Neighborhood Service Project. This project was a demonstration project to test the feasibility of decentralized services and to see what impact this would have on upgrading an economically depressed area of the City of Chattanooga.

In these health centers the nutrition consultant's service is available for antipartum, family and well-baby clinics, work with chronic disease patients and dental patients on a group conference basis. This direct patient group counseling is further expanded by occasional home visits with the public health nurse as indicated. This also serves as further inservice education for both the nutritionist and the nurse working cooperatively on a case where each learns from the other.

Division of Dental Health

The nutritionist has consulted with the dentist and dental hygienist who conduct dental health education regarding the role of nutrition in

dental health. The nutritionist discusses the role of nutrition and dental health with the groups of dental patients at outlying health centers.

Lead Poisoning Project

A portion of the nutritionist's time budget wise is spent with the lead poisoning program. Nutrition has become a part of this program by inservice periods with the lead poisoning staff. She also has the opportunity of discussing with staff the role of nutrition as it relates to rehabilitation of positive lead poisoning cases.

Health Education

The nutrition consultant offers consultation services to the health education staff as requested. From the nutrition files, the health educators may obtain materials to use when they participate in nutrition education programs. The nutritionist and health educators jointly plan and evaluate materials. The health educators in turn may assist with visuals such as posters, slides, lettered signs, and other aids for the nutritionist to use in programs.

Coordination of Nutrition Services with Other Agencies

In order for the public health nutritionist to make the most efficient use of her time, she must be knowledgeable of the programs of other agencies in the community having a nutrition component. She can then plan her programs and activities so there is no duplications of service.

There are several agencies and organizations in Hamilton County which the public health nutritionist works cooperatively in promoting good nutrition. The student had the opportunity to visit several of these, talk with their personnel, and observe their activities.

Dairy Council of Chattanooga. The public health nutritionist cooperates with the Dairy Council in fostering nutrition education in the public schools. The Dairy Council home economist uses the public health nutritionist as a resource for unanswered questions that often are presented. The nutritionist on the other hand uses many of the Dairy Council's nutrition educational materials in her work. Another activity of the Dairy Council is to coordinate nutrition activities in the community. The Dairy Council home economist serves actively on many community committees, including some of which the public health nutritionist also serves. Both the public health nutritionist and the Dairy Council home economist are interested in promoting good nutrition in the community.

The University of Tennessee. The nutritionist has often been invited as a guest lecturer to classes at The University of Tennessee at Chattanooga. The student was privileged to attend one of these lectures on applied nutrition. Class discussions have also been given on normal nutrition for the family using information on actual cases and research to emphasize the practical application of nutrition.

Extension Service. The University of Tennessee Agricultural Extension Service in Hamilton County brings the knowledge of research to

the people. Principles of nutrition, food buying and food preparation are some of the techniques relayed to the community to improve health. The public health nutritionist has worked closely with the consumer specialist from Agriculture Extension on various programs. The Extension Agent frequently shares printed materials with the nutritionist to use with families. The Extension Agent also refers people to the public health nutritionist if they need counseling regarding a modified diet.

Hamilton County Department of Public Welfare. The nutritionist also works with the Hamilton County Department of Public Welfare licensing agents of day care facilities. One of the legal responsibilities of the Tennessee Department of Public Welfare is to license individual homes, groups, and agencies who provide day care for children outside the home. Licensing is done not only to maintain minimum requirements for good care, but also to suggest desirable standards of care, to provide child-caring agencies with consultation services, and to increase the agencies' understanding of early development (23). Prior to the student's field experience, the nutritionist held three inservice meetings on nutrition with those responsible for licensing facilities for care of children.

The nutritionist was selected to serve on the Policy Council Committee for Day Care to represent nutrition for the community at large. The nutritionist and the director of the licensing division of the Hamilton County Department of Public Welfare developed questions for on-site appraisal of nutrition services in day care facilities. This was an effort to help Headstart and day care centers meet revised licensing

standards as well as promote better follow-up of children with nutrition problems, i.e., anemia.

The nutritionist conducted inservice meetings with "parent substitutes" for day care centers and day homes at the request of the Association of Day Care Agencies. The student was involved with one of these inservice meetings.

Team Evaluation Center. The Team Evaluation Center in Chattanooga is one of the two evaluation centers for retarded children in Tennessee. One of the objectives is to assist children who are functioning under the expected level for their chronological age in reaching their maximum genetic potential by the evaluation of the children's physical, mental, emotional, and social components by a multidisciplinary team (24). At present the nutrition component of the team is vacant. The public health nutritionist provides nutrition consultation to staff and follow-up of Hamilton County cases until such time as a nutrition worker is employed by the Team Evaluation Center, Inc.

Public Institutions. By request, consultation in nutrition is given to public institutions caring for handicapped children and others. This includes Orange Grove, the Preschool Development Center, Siskin Foundation, the Florence Crittenton Home and Parent and Child Center (22).

Program Evaluation

Methods for measuring the quality and impact of nutrition services are fundamental to program evaluation. The nutritionist keeps program

and service statistics to determine the numbers and types of demands for services. The nutritionist keeps a daily coded record which is a brief description of services offered. At the end of each month a summary report of activities and services are presented to the Director of the Health Department, the Deputy Director of Medical Services and a copy is sent to Nutrition Services in the Division of Family Health Services, Tennessee Department of Public Health, Nashville, Tennessee. See Appendix B for a copy of the monthly reports during the student's field experience.

CHAPTER III

STUDENT'S ANALYSIS OF OWN PERFORMANCE

Through orientation and observation the student was able to broaden her perspective in public health nutrition in the health agency and the community. Actual practice enabled the student to improve her skills in providing nutrition services. A brief account of the experiences plus an assessment of their value to the student is included in this chapter. Part I includes the student's analysis of abilities through observation and/or experience. An evaluation of the student's field project is given in part II.

I. ANALYSIS OF ABILITIES THROUGH OBSERVATION AND/OR EXPERIENCES

Consultation with Other Professional Workers.

One of the services that a public health nutritionist offers to other professional workers is consultation. The student had the opportunity to provide this service as well as observe the consultative techniques of the public health nutrition consultant in the Chattanooga-Hamilton County Health Department.

The student functioned in the capacity of nutritionist at Soddy and Daisy Health Centers on the second and fourth Monday and Tuesday of the month. During this time the student had the opportunity to counsel the nurses individually about problems relating to nutrition that had

occurred. For example, the nurse expressed the need for better understanding of the diabetic diet since she had recently been assigned three elderly diabetic patients in her case load. The exchange lists were thoroughly explained and the available variety within the exchanges was stressed. During the consultation, questions were asked to evaluate the nurse's understanding of the principles of the diet. Both the nurse and the student made contributions to the problem-solving process. Participation in this process increased the student's understanding of the consultation process.

In several cases the student observed the nutritionist in her role as a consultant. One such occasion was a consultation with the director of health services for the County Head Start Program. The consultee was interested in information material and suggestions for a future program on high iron, calcium and protein foods to be presented to parents of preschool children. Accurate and pertinent information was given and referral to the Dairy Council for additional visual aids was made by the Nutritionist. Observation of the public health nutritionist's application of the techniques that the student had studied in class increased her understanding of the consultation process.

The student had the opportunity to accompany the director of Hamilton County School Food Service program on a routine visit to several schools. These visits gave the student an opportunity to meet the principals of the schools and get their ideas of the nutrition education in the schools. These experiences reemphasized to the student the need for required nutrition courses for the prospective teachers in the school systems.

Group Work with Professional and/or Nonprofessional Groups.

An insight into working with personnel having different types of background was gained by participating in three on-site appraisals of the nutrition services offered in Head Start Programs. The nutritionist and the Director of Day Care Licensure Division of the Hamilton County Department of Public Welfare prepared questions related to nutrition of children in day care facilities. These were used in an evaluation of nutrition services compared to the standards now set up for licensure by the Department of Public Welfare and the Department of Education for day care facilities. The student participated in all three on-site appraisals. Each program observed presented different problems; a variety of professional backgrounds were represented in the participants. For example, the participants of the first monitoring consisted of the nutrition consultant who coordinated the program, the Director of Day Care Licensure Division of the Department of Public Welfare, the Director of the Head Start Program, the Director of the day care program, the Coordinator of Parent Involvement, the lunch manager and the student.

Participants in the second monitoring included the program nurse from the county educational department, a teacher, the food service manager, the director of licensure, the public health nutrition consultant, the student, and four parents. The participants of the last monitoring included the program nurse, the director of day care licensure, a licensure worker, the nutrition consultant and the student. A discussion of summary findings was made and an overall concise report was submitted to the Policy Council Committee on Day Care.

In these meetings several contacts were made by the nutritionist with both professional and nonprofessional personnel who prior to the series of on-site appraisals were not aware of the services of the nutritional consultant. This experience not only gave the student an opportunity to work with professional but also nonprofessionals at the same time. This provided the student with an insight to the contributions which may be made by nonprofessionals as well as professionals and their ability to work together toward better day care for children.

A different type of meeting was attended where group work with professionals was observed during the regularly scheduled medical review conference at the health department. Present at the meeting were the team nurse supervisor, the medical director, the nutrition consultant, and a private physician. All aspects of patient care were discussed including nutrition. One main objective for the medical review is to maintain an open line of communication between the private physician, the hospital and the health department staff.

In another observation by the student, the nutritionist had received a request to speak to a nutrition class at The University of Tennessee at Chattanooga. The nutritionist first inquired about the academic backgrounds of the individuals in the class. From this information she was able to present a program applicable to all present. This observation emphasized the necessity of adaptability to group background and need.

The student had the opportunity to accompany the nutrition consultant on a follow-up visit with day care licensure workers and the director of the licensure division of Hamilton County Department of Public Welfare.

The nutritionist had previously conducted inservice classes for the day care personnel. The purpose of this meeting was to get feedback from the licensure workers on the effectiveness of those classes and to help solve any nutrition related problems that may have appeared since their last meeting. The student was able to share with the director material that had been designed the previous quarter at The University of Tennessee for use in interpretation of nutrition-related standards for day care centers. The director and the licensure workers were pleased to have this information. This experience not only gave the day care licensure workers a better understanding of nutrition consultant responsibilities but gave the student a clearer view of the responsibilities of the licensure process and the importance of cooperation among professional workers.

While a group of children were waiting for their dental appointments, the student was asked to talk to them about nutrition. This gave the student an opportunity to present an impromptu talk. Since a nutritionist must often think on her feet and be flexible enough to handle many situations, this experience with the children was valuable. Response was good. This is a frequent nutrition activity in the community center in which the nutrition consultant's services are committed for two and one-half days a week.

On one occasion the student was responsible for a program on selecting and buying foods for a group of mothers at the Parent-Child Center. This center is a demonstration project designed to reach children under three years of age in order to prevent social, physical and emotional deficiencies at an early age caused by environmental conditions. The focus of the staff effort is upon the entire family. The program is designed

to reach a maximum of fifty families. The presentation was conducted in a very relaxed manner. The student encouraged discussion and comments during the presentation. Those participating were very cooperative in sharing experiences with each other. Also attending the meeting was the registered nurse at the Parent Child Center and the social worker for the center. The student enjoyed the time spent with this group and felt that some information given would be used.

Another opportunity for group work occurred when the student was asked by a public health nurse to discuss nutrition with a group of pre-natal patients at an outlying health center located in a church. The nurse was prepared to give information on the development of the child and the student was prepared to discuss nutrition during pregnancy. None of the expected participants turned out for the class. The student and the nurse asked a group of volunteers gathered on the next floor of the building to be our audience. The student adapted the presentation to fit the change in audience composition. The women attending enjoyed the meeting and the student and the nurse felt that a need had been met even if the target group was not present.

Conferences in Behalf of Planning

Throughout the field experience the student was involved in planning conferences whenever possible, especially with regard to scheduling of activities to help the student to fulfill her objectives for the field experience. Continuous modification and evaluation were necessary.

The student attended and participated in a planning conference in which the public health nutritionist, the regional nutrition consultant

and the director of nursing services of the Crippled Children's Hospital explored the possibilities of conducting regular diabetic classes for patients and parents. Patients seen in this clinic came from the counties of the southeast region of Tennessee. The nutrition consultant had participated in a preplanning conference with the medical staff at Children's Hospital in regard to these classes. Since the patients come from other counties in the region, the major responsibility is regional but the local nutrition consultant may be called in when the nutrition consultant from the region is unable to attend.

Another example of planning was during the preparation of a weight control pamphlet to be used with teenagers as a special project during field training. The student was involved in planning with the nutrition consultant, the health education staff member responsible for format of pamphlets and materials and the two health educators at an outlying health center to secure their suggestions and guidance. Until this time, the student had very little knowledge of the cooperative planning and preparation necessary for the printing of instructional materials.

The student was fortunate in attending a planning conference for conducting a nutritional survey on a group of emotionally handicapped children at Smallwood School which is affiliated with the Moccasin Bend Psychiatric Hospital. The survey was requested by a doctor who was concerned about the children's nutritional intake. The students live at the school during the week and return to their homes on the weekend.

Participating in the planning with the nutritionist from the Hamilton County Health Department were the Southeast Tennessee Regional Nutritionist, the dietitian of Moccasin Bend Hospital, the principal of

this special school, the food manager of the school, and the author. Survey date, survey time span, and methods were discussed. Before the meeting the student formulated a menu card to be used in obtaining accurate dietary information from the children which is included in the Appendix. The method of using the card was accepted by all participants. The student was able to contribute to the process of implementation even though she was unable to be present during the actual survey.

Guidance and Counseling Nonprofessional Persons

Interviewing and counseling are techniques often used by the public health nutritionist. The hospital dietitian also uses these techniques. Before entering graduate school, the student was employed by a hospital as the dietitian for two years. Most of her experience was with middle-class individuals, but some experiences were with low-income individuals. The hospital experience helped to develop some skill in interviewing and counseling. Experiences during the field training in Hamilton County, both through observation and participation, enabled further development of skills in these areas and provided more opportunity to work with low-income individuals.

Techniques used to establish rapport with the patient, to individualize interviewing and counseling, and to emphasize basic principles of nutrition and the application of them were noted by the student during observations of the nutritionist. During counseling and guidance sessions at Soddy Health Center, Daisy Health Center, and with Soddy-Daisy High School the student functioned as the nutritionist. With the prenatal patients, the teachers, the students, parents of students,

and a variety of other clinic patients, the student used techniques that had been observed as well as techniques already acquired. The student was allowed to counsel all prenatal patients seen at the Daisy Health Center and was able to see selected patients at the Soddy clinic. The student encountered no difficulty in establishing a good rapport with the patients.

Additional clinic counseling experience was gained by seeing diabetic children and their parents at the diabetic clinic at Crippled Children's Hospital. The student was able to participate in the initial session of interviewing and counseling to determine the need of the patients for planning content of the diabetic classes.

The student was responsible for a home visit counseling with an elderly diabetic who had difficulty in regulating blood sugar level. The student suggested alternative and substitutions instead of only omissions. The nutritionist accompanied the student on this visit which was beneficial to both through the sharing of ideas for the patients's well being.

Two days were spent with the South East Tennessee Regional Nutrition Consultant at two rural county health departments, Grundy County and Marion County. During this period the student was able to compare the problems of the rural health department with an urban health department and also to observe the regional nutritionist in counseling of patients as well as participate in the counseling. The student also observed nutrition consultation services as the regional nutritionist worked with members of two local health departments.

During a visit with the weight control class at Soddy-Daisy High School a teacher at the school asked the student if she would consult

with a young lady who was caring for two younger sisters, a brother, and her mother. The student agreed to see this girl but first inquired into the situation further. The mother had not been diagnosed but was thought to be mentally and emotionally incapable of functioning. Seldom did she even speak. The young girl was seventeen and had two sisters, ages eight and ten and one brother, age fourteen. There was no father in the family. The young lady managed the household as well as she could plus attending school.

After meeting with the girl, the student learned that the family had a limited budget and that the grocery shopping was done in a haphazard fashion by taking her sisters and choosing foods they liked. Frequently she wondered if there would be enough money to pay for the groceries.

The student explained the advantages of preparing a menu and shopping list from the menu. The girl appeared interested and stated a desire to try one. The student arranged another meeting with the girl in which the student and girl prepared a menu for one week. The student feels that by using the girl's choices of foods, with guidance from the student, the menus would be more acceptable and usable. Throughout the process of menu planning the student stressed the importance of choosing nutritious foods with suggested ways to insure this on a limited budget. Also by involving the girl in the preparation, this gave her encouragement and additional support which was so desperately needed. During this second meeting, the student found the girl more relaxed and talkative. This case is an example of extended nutrition referral service.

An additional opportunity for guidance and counseling nonprofessional persons occurred in connection with the Soddy-Daisy High School weight

control class which will be discussed later in the report. Several girls requested home visits in order to increase parental support for the weight loss of the participants. While the student was visiting the home of one girl in the class, she found that the mother was a diabetic and should be following a diet. The student inquired into the situation and discovered that this lady had been in poor health for several weeks and had not returned to the doctor for treatment. The student asked to see the diet instructions that she had received from her doctor. The student reviewed the mechanics of the diabetic diet and the importance of following it. The student felt that this visit not only benefited the girl concerning her weight loss, but contributed to the health of the parent. This is an example of total family services offered by the nutrition component of the public health department and the flexibility necessary for the nutritionist employed to serve an area.

Inservice Education

Inservice education refers to activities designed to further knowledge and stimulate professional growth for agency personnel. Programs given may vary with the needs and the interest of the group.

The student contributed to an inservice education program for persons responsible for care of children in day care facilities on the subject of wise food purchasing. The nutrition consultant had held discussions with this group two times prior to this meeting. The audience consisted of representatives from the Association of Day Care Agencies as well as parent substitutes, all with one main interest, the care of children.

The presentation consisted of selection and preparation of food for less cost while still meeting nutritional needs of children and families. The student felt that the presentation was of interest to those attending as was evidenced by their comments and discussions during and following the program.

II. AN ANALYSIS OF PARTICIPATION IN A SPECIFIC SERVICE ACTIVITY

Introduction

The field project assigned to the student during her experience allowed her to assume the responsibility for and contribute to a critical nutrition need. The project assigned was to work with a group of overweight girls at Soddy-Daisy High School, two of whom exceeded 200 pounds. Second priority was to develop a pamphlet for use with overweight teenagers.

A weight control class had been formed through the interest of the school nurse, the physical education teacher, the home economics teacher and a business teacher. Initially only the physical education teacher and the business teacher were participating in the classes. With the cooperation of the principal the schedules for the group of girls had been arranged so they would be together one period each day. During this period the girls had special exercise and a weekly weigh-in. No previous nutrition education classes had been given. The involvement of the public health nutritionist was suggested by the public health nurse assigned to

the community. The nutritionist had then made one visit with the group to present a program on adolescent nutrition and weight control. A 24-hour food-intake was taken which indicated poor eating habits. This project was designed to present a challenge to the student as well as contribute to the overall weight reduction program of the students involved.

The student developed a follow-up nutrition education project with these overweight teenagers and initial planning was done. Several recent articles were reviewed concerning weight control for teenagers. A brief conference was held with the school nurse in which more information was gained about the girls. The student constructed a graph to show weight loss or gain to be used by each girl as she plotted the amounts each week. See Appendix D. Before each meeting with the girls the student arranged to have a conference with the teachers involved in the weight loss effort. The student asked questions of the teachers concerning the girls' present physical condition and their progress of weight loss thus far.

Objectives and Procedure

The student held planning conferences with the nutritionist prior to the first meeting with the weight control class to develop objectives for the project and the methods to be used to achieve them. The long-range objective was to improve the nutritional status of the students involved. The short-range objectives were:

1. To develop an understanding for nutrition in the weight control program.

2. To stimulate the weight loss of the girls involved in the program.
3. To prepare a weight control pamphlet to be used with overweight teenagers.

For this first lecture the student included ways to help control and lose weight. Information discussed was planned for the girls' educational level and interest. Because of inexperience in working with this age group, the student was at first somewhat apprehensive. The awareness that the girls were sincerely interested enabled the student to regain her confidence. The presentation was informal and time allowed for comments and questions. The student encouraged the class to share ideas that had helped them to lose weight. Participation was very good and the class seemed to be vitally interested in the information on how to control weight gain. From this presentation the student saw the importance of planning the points to emphasize, of rehearsing the presentation, and using factual information. The nutritionist was pleased with the presentation and the interest displayed by the class. She also stated that a rapport beyond her expectations had been established between student and the class members. The school system was found to be an excellent medium through which the public health nutritionist may bring nutrition information to the teenagers who are at high nutritional risk.

The second visit with the weight control class was made during an exercise and weigh-in session. This gave the student an opportunity to weigh the girls and demonstrate the use of the weight chart which had been designed by the student to plot weight loss and gain. This period

also enabled the student to have individual conferences with each girl in which specific questions and problems could be discussed. The student individualized the counseling session to promote understanding and achieve good motivation.

Three girls indicated a desire for the student to make home visits. Frank discussions with parents was found to provide additional support for the weight control efforts. During home visits with parents of overweight girls, the student found the parents very concerned and willing to help in the efforts toward weight loss. There was a variety of home situations. One girl lived with her grandparents, one was the only child of an upper economic level family, another was one of several children of a low income family. The student found no difficulty in relating to family members and in explaining to them some of the ways to help the girls in the loss of weight. The school contacts enabled the student to introduce nutrition services directly to the family on home visits and indirectly through the class members. The student believes that parental interest and involvement is very important in a good teenage weight reduction program.

The third and final visit with the weight control class at Soddy Daisy High School brought fruitful results. All girls except two had lost weight. The student, the teachers, and the girls themselves were pleased and encouraged. The student continued to encourage them and give them support. The main topic discussed at the last meeting with the girls was the importance of eating breakfast. Emphasizing the fact that breakfast did not have to be the routine eggs and toast but could consist

of cheese, fruits, milk, and cereals. The student encouraged the girls to begin with a lighter breakfast if they were not accustomed to eating before noon. With each visit a better relationship developed between the class and the student. Experiences such as the above described activities strengthens the student's abilities to establish rapport at different economic levels.

The third objective was to prepare a weight control pamphlet for teenage use incorporating experiences obtained during the weight control project. See Appendix D. The student used many points learned directly from the group who would use the training aid. The student learned that the group did not classify themselves as adolescent or teenage but as young adults. In preparing the pamphlet the student made no reference to teenager or adolescent thus enabling the use of the pamphlet with other groups as needed. The major task was deciding what the pamphlet should contain. The student attempted to approach this from the view of an overweight young person. During one session with the class the student discussed several points that would be helpful to employ when losing weight. The class was very interested in these points and later indicated their use. From this feedback the student included these points in the pamphlet. Also included were foods to avoid and foods to eat generously thus giving the reader an alternative path. The student was surprised to find the large number of carbonated drinks consumed by these young adults; therefore, the substitution of diet drinks was included in the pamphlet. Consideration of the food habits was a major concern in preparing the pamphlet. Also included was a meal pattern with several snacks. For many of the girls the snack after arrival home from school presented a

problem. Instead of the usual coke, cake and sandwich an alternative of fruit and milk was suggested. The student included a breakfast pattern because several girls did not eat before noon and a few ate nothing until their arrival at home during the afternoon. The inclusion of breakfast was an attempt by the student to encourage eating before noon. The student designed the pamphlet to reflect current life styles of the teenager, thereby increasing its effectiveness. The cover of a pamphlet should be attractive and appealing to those who will be using it. The cover picture originated during a shopping trip in which the student observed a young overweight girl looking wistfully at an undersized dress.

After a rough copy was prepared the student conferred on several occasions with the person responsible for printing. Discussions included important points that the student had not previously considered such as the spacing, the lettering, the colors and the page size; all contribute to a more effective teaching aid. Conferences were held with the nutritionist throughout the planning process concerning the pamphlet.

Evaluation and Conclusion

Evaluation of the project was the next step in the planning sequence. During conferences with the teachers prior to each meeting the student received feedback concerning the activities of the weight control class, their progress and comments since the last meeting. These meetings were of great benefit to the student in establishing and maintaining cooperation with the teachers and insuring a continuous support of good nutritional habits in the weight control program. During the last conference the teachers expressed their gratitude for the student's help.

The teachers said that the student gave the necessary degree of support and encouragement to the program which was evidenced by the continued weight loss of the group as seen in Table 5. The loss of weight during the five-week period was found to be statistically significant ($P < .05$).

With each visit the student felt and expressed her joy with the girls as weight loss continued and gave encouragement to those who did not lose. During the five weeks that the student was involved with the project, all girls lost or maintained weight. No individual girl gained during the time the student was working with the class. The student contributes these results to the excellent rapport and good communication established in the informal person-to-person contacts, the use of sound nutritional knowledge and the motivational support achieved through individual and group nutritional counseling.

From the experience of developing a pamphlet the student now has a better understanding of the time, effort and considerations necessary to prepare educational materials to further the knowledge and acceptance of good nutrition and the betterment of health. The Tennessee Regional Nutrition Consultant, Miss Margaret Majors, examined the pamphlet and suggested it be made available for state-wide distribution. Teenage weight control literature is needed throughout Tennessee.

The weight control project has contributed greatly to the personal and professional development of the student. Invaluable experience was gained in planning, executing and evaluating the weight control classes. The student gained an insight into the amount of time and effort necessary to conceptualize and create a nutrition education teaching aid.

TABLE 5
WEIGHT LOSS IN POUNDS OF WEIGHT CONTROL CLASS
DURING A FIVE-WEEK PERIOD

Names	Weight At First Visit	Weight At Last Visit
Inez	148	140
Rita	166	157
Bea	275	270
Sherry	246	245
Carol	130	128
Barbie	132	128
Liza	146	142
Melissia	129	129
Martha	139	138
Joyce	156	154
Tommie	153	150

CHAPTER IV

SUMMARY

The student enjoyed an excellent field experience which enabled her to meet the objectives formulated in preparation for the field training. Her understanding of the role of the nutrition consultant in the community has been broadened by combining this practical experience with the knowledge acquired in the academic program.

The consultant role of the nutritionist as observed in continuously trying to promote an awareness of nutrition problems in the community, by stimulating the desire to improve nutritional practices in the community and to stimulate nutrition education through other health disciplines.

The experience provided the student with an overview of a total county health program, the role of the nutritionist in the program, and an opportunity to observe and participate in nutrition activities both individually and with other professionals. The student feels that she has made excellent progress in developing her professional attitudes, skills, and confidence so necessary for the successful practice of public health nutrition.

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APPENDICES

APPENDIX A

CURRENT JOB SPECIFICATIONS FOR NUTRITION

CONSULTANT, STATE OF TENNESSEE, 1973

NUTRITION CONSULTANT

General Character of Duties.

DEFINITION: Under administrative direction of the Director of Local Health Service and under general direction of the Director of Nutrition Service, to be responsible for the public health nutrition program of a major region; to perform related work as required.

EXAMPLES OF DUTIES: To assist in planning the state-wide public health nutrition program; to provide consultant service to local health departments; to work with staff members in coordinating the public health nutrition program with other phases of the public health program; to work with lay and official groups and agencies in promoting an integrated nutrition program; to assist in planning and participate in an in-service program of nutrition education; to participate in general in-service training programs; to prepare and compile education materials; to prepare and deliver lectures and talks to lay, professional, and technical groups; to assist in special studies and surveys; in some instances, to supervise nutritionists of lower classification; to keep records and make reports.

Minimum Qualifications.

EDUCATION AND EXPERIENCE: Graduation from an accredited 4-year college or university with major in foods and nutrition or with a major in the basic sciences or education plus courses in food and nutrition equivalent to those required for bachelor's degree in home economics with a major in foods and nutritions; 1 successfully completed year of graduate study with a major in human nutrition and 2 years of successful full-time paid employment in a related field in a public health, welfare, or related institution, organization, or agency with a program of food and nutrition.

OR

an equivalent combination of education and experience, substituting 1 year of dietetic internship or 1 additional year of graduate study in a related field for 1 year of the required experience, with a maximum substitution of 1 year.

KNOWLEDGE AND ABILITIES: Thorough knowledge of the principles and practices of nutrition as related to the control of disease and promotion

of public health; considerable knowledge of the aims and services of a health department at state and local levels, and of general public health laws of Tennessee; knowledge of county government in Tennessee, of the principles of public health education, of organizational techniques, and of the organization and resources of public and private organizations related to public health; as evidenced by a passing grade in a practical written test.

Ability to deal tactfully with the public and co-workers, to exercise good judgment in evaluating situations and making decisions, to express ideas clearly, concisely, and convincingly, to address an audience effectively, and to plan and direct the work of others; as evidenced by an investigation and a passing grade in an interview.

RELATIVE WEIGHTS OF EXAMINATION PARTS:

Written Test, 4; Education and Experience, 4; Interview, 2.

Approved: Department of Personnel, July 1, 1957.

APPENDIX B

MONTHLY REPORT NUTRITION SERVICES

Jana Jones, Nutrition Consultant

April, 1973

Seventy six conferences were held with the staff and other agency representatives in behalf of the program in nutrition during April. The writer spent considerable time this month as a representative of the Day Care Committee for Chattanooga-Hamilton County as consultant in the area of nutrition. This was an effort to assist the Day Care and Headstart Centers in meeting the new standards set up for programs caring for children. The graduate nutrition student accompanied the writer to Bethlehem Center, Cedar Hill and Daisy Centers as a part of the committee making on site appraisal of food services.

Two meetings were also attended with representatives of Department of Education, Department of Public Welfare, parents, Children's Hospital and the Chattanooga-Hamilton County Department of Public Health to summarize the findings from the surveys.

Two meetings were held during this interim with the parent substitutes in an effort to emphasize better nutrition with emphasis on iron rich foods for follow-up and prevention of nutritional anemia.

Eighty-eight persons were contacted by the nutrition consultant in group meetings this month. These included a group of food service people attending a luncheon given by the Rice Council, a weight control class at

Soddy Daisy High School where Mrs. Colvard led the discussion, a conference re diabetic classes for CCS to be taught by the Regional Nutrition consultant and an Advisory Council Neighborhood Service Project meeting.

By request the writer discussed applied nutrition for Mrs. Thompson's class in the U.T. Home Economics program.

Five home visits were made to assist patients with meal plans and diet. Thirty-one other patients were referred for dietary counseling.

Several conferences were held with the graduate student to assist her in questions regarding her thesis and the follow-up with the Soddy-Daisy Weight Control class. This included discussion with her in preparation of the weight control leaflet for teenagers she prepared as a special project during her field training. This will be produced for use in the Chattanooga-Hamilton County health program. The state nutrition staff may want to reproduce it for state wide nutrition counseling in health departments.

The writer and Mrs. Hamlin, with assistance from other staff members planned, prepared and served the Advisory Council luncheon during this period. Approximately forty persons attended.

The graduate nutrition student serving as nutritionist in the Soddy-Daisy area made additional contributions to the program during the month of April. Twenty-four patients were counseled regarding diet, three follow-up sessions were held with the weight control group of girls (approximately twenty-three) at Soddy-Daisy High School. Eleven follow-up visits to strengthen parental support of the girls in the home were made. She counseled with staff regarding modified diets. Fifty-eight persons were contacted regarding nutrition. She accompanied the writer

in the on site visits to day care centers. In addition she visited the Siskin Foundation, Pre-School Development Center, Orange Grove, Mobile Meals Program at Soddy, Team Evaluation Center, East Side Center and Dairy Council, and made visits to three school feeding programs with the County School Food Service supervisor to learn of the nutrition component of other community agencies.

She has made a good contribution to many areas of the health program. The teachers at Soddy-Daisy commented on the real and practical support given with the weight control class. All the girls except one lost weight. Another high school student requested help with meal planning as her mother was ill and she needed guidance in planning for the family on a limited budget.

Jana Jones

MONTHLY REPORT NUTRITION SERVICES

Jana Jones, Nutrition Consultant

May, 1973

One hundred three persons were met in groups in which nutrition was discussed during May. This included dental appointees, Parent Child Center Parents, Day Care staff and Day Care parent substitute groups, Nutrition Council meeting, Advisory Council from Eastside and a planning meeting for classes for unwed mothers conducted by Dr. Howard. An additional meeting attended was a staff meeting on lead poisoning.

Eighty-one persons were contacted in nutrition conferences. Many of these were health department staff members, day care staff and Department of Welfare licensing personnel. Considerable time was spent with the Day Care Staff, Department of Education personnel and licensing staff of Department of Welfare this month as a member of the committee concerned with new day care licensing upgrading. On site visits were made to Bethlehem Center, Cedar Hill and Daisy to observe children and the food service participation and planning. Dr. Failing was contacted regarding some of the needs for improvement relating to environmental problems. Miss Heyer of the Department of Public Welfare has expressed an interest in meeting with Dr. Failing, his staff members responsible for inspections and the writer, to assist Day Care Centers and Day Homes in meeting licensing requirements.

One meeting was held with Mrs. Elenora Varney, Dietitian at Moccasin Bend Psychiatric Hospital, re possible diet survey at Smallwood School.

This, however, will be delayed until fall as a new principal will be employed this summer. Mrs. Colvard, U.T. graduate nutrition student, participated and made a vital contribution when survey plans were discussed with Mrs. Varney.

Seventeen patients were referred for individual counseling for weight control and chronic disease. More were reached through staff materials provided - i.e. meal plans for specific diets and weight control.

Mrs. Bock, nurse at Parent Child Center on Dodds Avenue was interested in nutrition materials to use with families participating in this program. Mrs. Colvard did the follow up by discussing these with her.

Considerable time was spent assisting the student with planning for meetings and reviewing her thesis on the field experiences provided and finally reviewing this with Dr. Dan Hubbard of the University of Tennessee, Knoxville Nutrition Department staff.

More referrals are being made regarding weight control and diabetic diet follow up. Some time has been spent preparing suggested menu plans suitable to the regional food patterns to assist staff in follow up with patients on recommended diets. We now have these for 1000, 1200, 1500 and 1800 calorie diet plans. These are now being "tried out" before many are printed. If these prove practical this would perhaps make a vital nutrition contribution to follow up with patients referred for dietary assistance.

Five days of annual leave and one and one half days holiday were taken this month.

Mrs. Charlotte Colvard's contribution to nutrition services in May follow:

Fifty eight contacts were made in group discussion. Twenty contacts with health department staff and that of other agencies which included a discussion with Day Care Parent substitutes, DPW licensing staff in Day Care, Parent Child Center mothers, a class on nutrition at Signal Mountain, follow up with the nurse at the Parent Child Center.

Mrs. Colvard also visited the Preschool Development Center, the Florence Crittenton Home and accompanied the writer on the Day Care Center observations at Daisy, Bethlehem Center and Cedar Hill as well as two of the committee meetings on Day Care. She visited three county schools with the County School Food Service Supervisor.

She made three visits to the weight control class at Soddy-Daisy High School. She held eleven follow up conferences with girls and made nine home visits with the girls' parents regarding food problems and the weight control program. Concurrent conferences were held with teachers involved as work with the weight control group progressed. Most of the girls lost weight. She also prepared a handout on weight control chiefly for teenagers while working with this group of girls.

May 18 completed her seven weeks' field training. She had established good rapport with the staff and made a good contribution to the nutrition program during her stay.

APPENDIX C

MENU CARD AND EXPLANATION FOR USE FOR DIETARY

INTAKE SURVEY OF SMALLWOOD SCHOOL

MENU CARD 21	
PLATE	NO. OF SERVINGS
Chicken leg - 1	_____
Mashed potato - 1/4 C	_____
Turnip Greens - 1/2 C	_____
Roll - 1	_____
Butter - 1 tsp.	_____
Canned Pear - 1/2	_____
Milk - 1/2 pt.	_____
----- TEAR HERE -----	
TRAY CARD 21	
Chicken	_____
Mashed Potato	_____
Turnip Greens	_____
Roll	_____
Butter	_____
Canned Pear	_____
Milk	_____

Child's name recorded on back of Menu Card by teacher

When child comes to end of line, items on tray are recorded under No. of servings

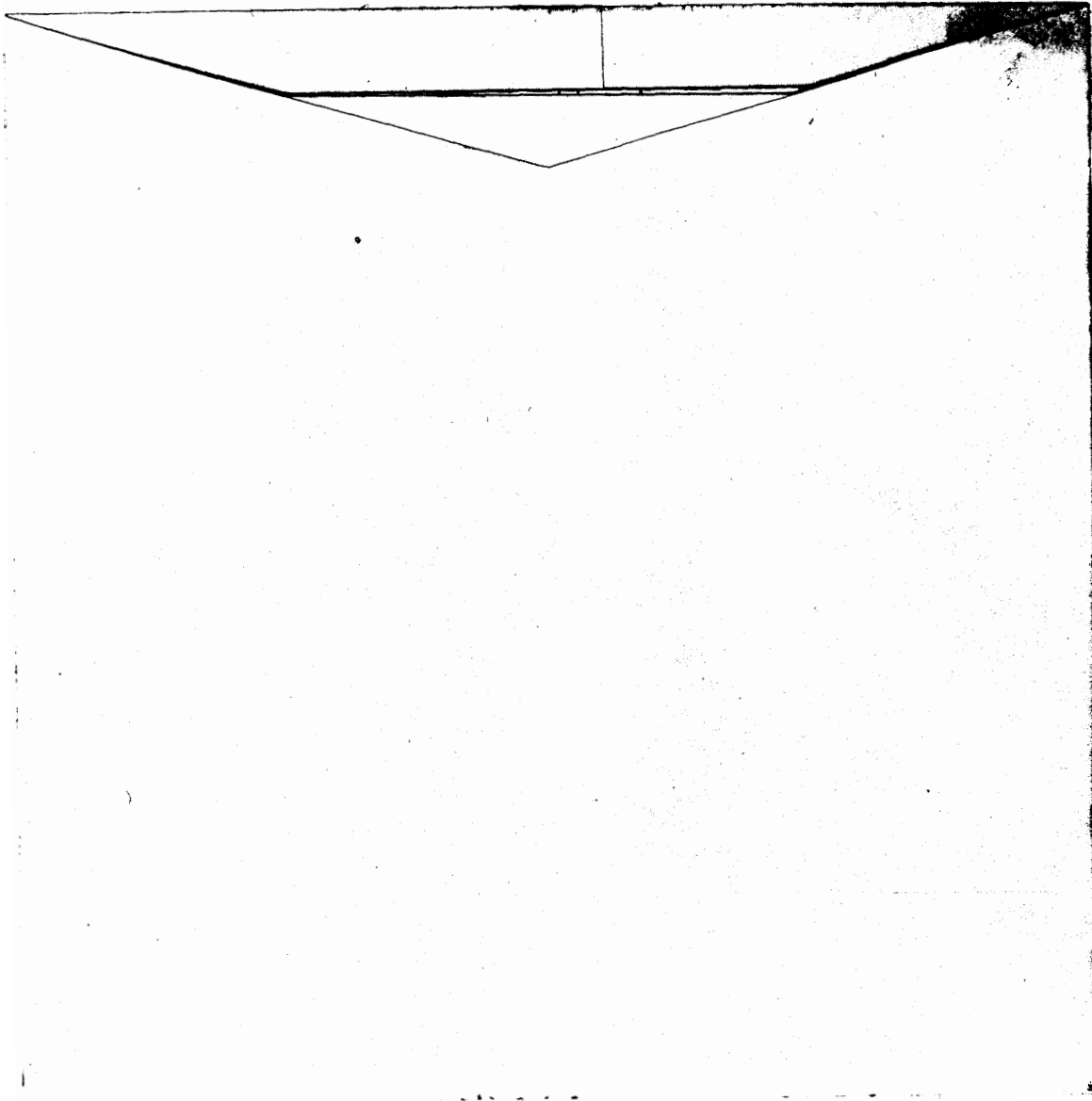
Tear off and put on child's tray

Plate waste is recorded on tray card after tray has been returned

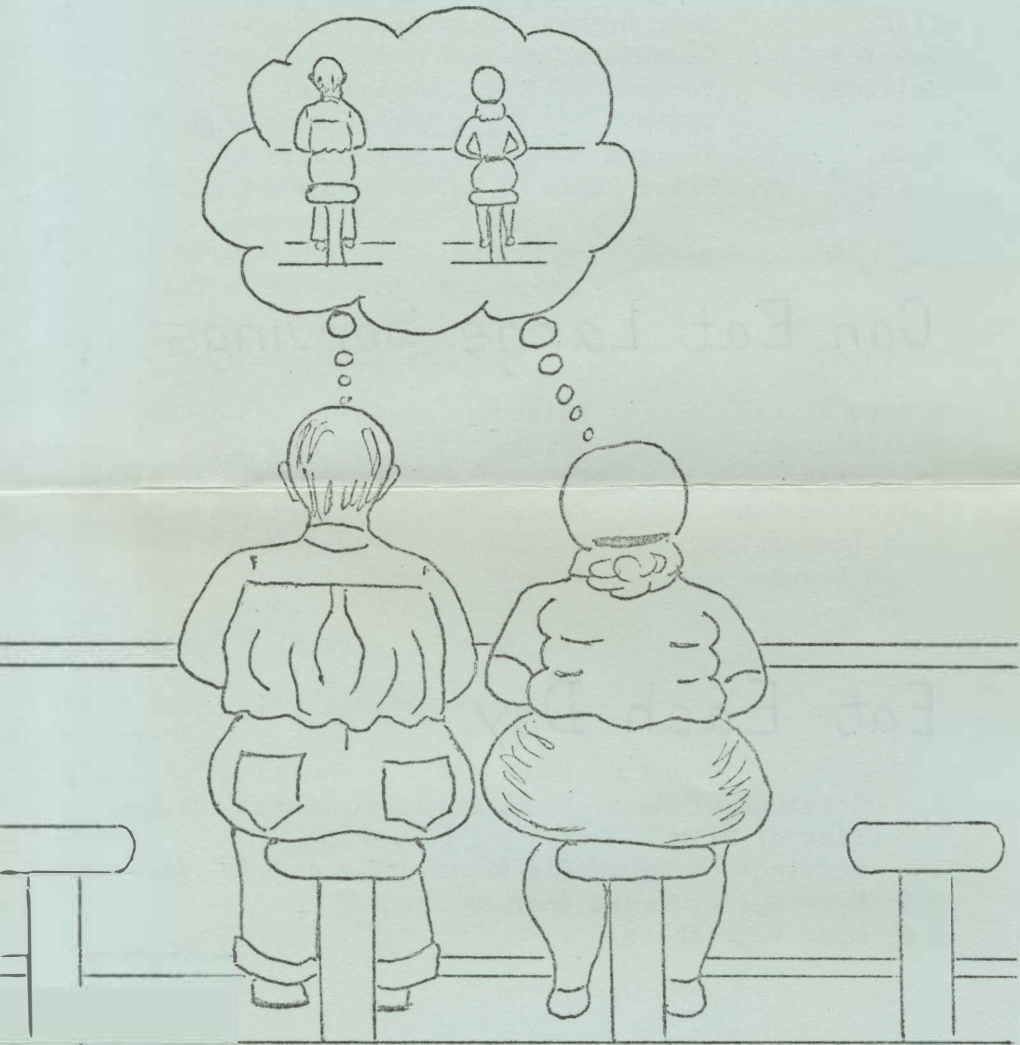
Amount eaten computed by comparing the menu card with tray card, both of which bear the same number at right

APPENDIX D

WEIGHT CONTROL PAMPHLET FOR TEENAGERS



JUST IMAGINE



Do Not Eat!

Candy	Nuts	Potato Chips
Sugar	Ice Cream	French Fries
Cakes	Doughnuts	Fried Foods
Pies	Soft Drinks	Pancakes
Cookies	Chocolate	Waffles
Jellies	Popcorn	Spaghetti
Jams	Bacon	Salad Dressings,
Honey	Sausage	Mayonnaise
Syrup	Fried Meats	Puddings

Can Eat Large Servings

Tomato Juice	Lettuce	Cucumber
Cauliflower	Tomato	Broccoli
Sauerkraut	Cabbage	Asparagus
Yellow Squash	Greens	Dezerta
Okra (not fried)	Radishes	Diet drink
Green Beans	Celery	

Eat Each Day

- 2 Servings of Meat, Fish, Poultry, Cheese or Eggs
- 1 Pint of Milk
- 3 Servings of Bread (no butter)
- 3-4 Servings of Fruit (not sweetened)
- 3 or more Vegetables

To Help You Lose Weight!

1. Make up your mind to get rid of those pounds.
2. Eat slowly. Chew each bite well.
3. Eat regular meals at regular times.
4. Do not skip BREAKFAST.
5. Drink several glasses of water each day.
6. Keep busy when you get bored! Take a walk, call a friend, ride a bike.
7. Get MORE EXERCISE.
8. Watch those snacks!
9. Keep a diary of everything you eat during the day.
10. Use a small plate.
11. Weigh only once a week.
12. Share your dieting experience with a friend.
13. At the drive-in order only a coke -- not french fries or milkshake.
14. Have the support of your family.

FOLLOW THIS PLAN

BREAKFAST

1 cup milk		1 egg
3/4 cup dry cereal	or	1 toast
1/2 cup juice		1/2 cup juice

LUNCH

sandwich
 1 slice cheese or meat
 2 slices bread
lettuce
tomato
beverage (low calorie)

SNACK

fruit
1 cup milk

SUPPER

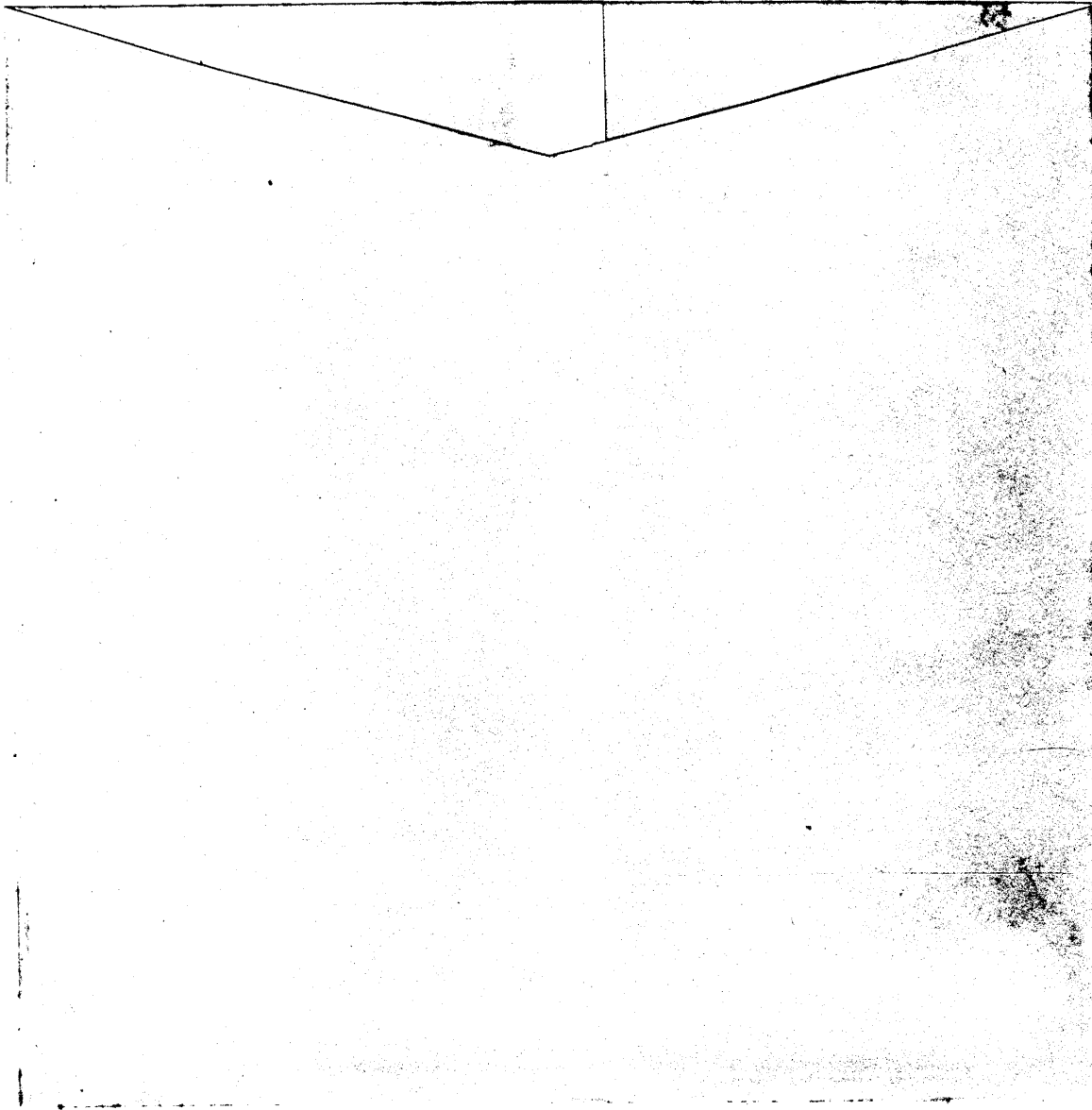
1 serving meat or 1 cup beans
2 servings vegetables
 1 cooked
 1 raw
1 cup milk

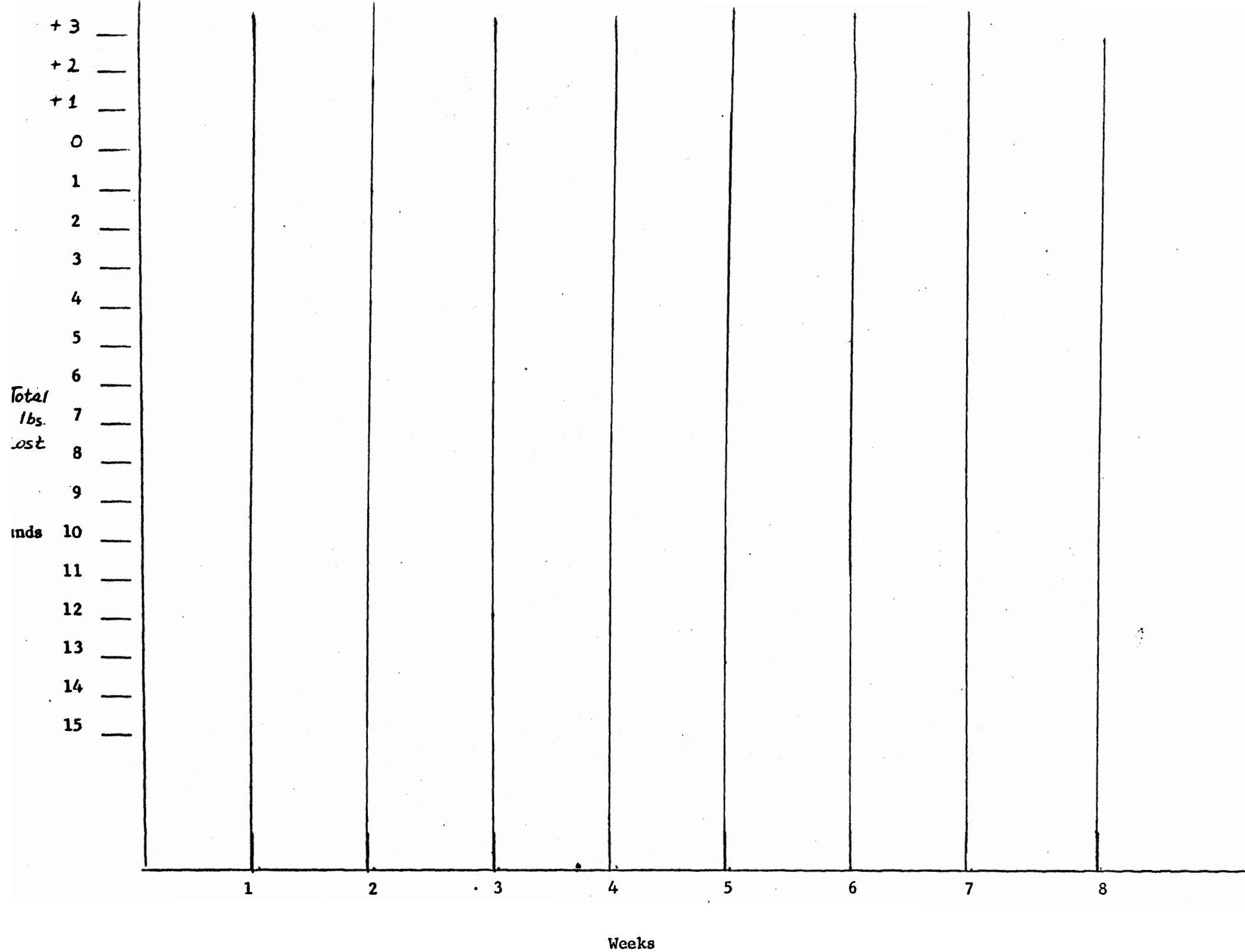
SNACK

1 fruit

APPENDIX E

CHART TO PLOT WEIGHT LOSS OR GAIN OF WEIGHT CONTROL CLASS





VITA

Charlotte Bickford Colvard was born in Pikeville, Tennessee, in 1945. She graduated from Bledsoe County High School in 1964 and received her B.S. degree in Food Science and Institutional Management from The University of Tennessee in 1968. The author took her dietetic internship at Vanderbilt University Hospital in Nashville, Tennessee, graduating in 1969.

After graduating from her internship, the author worked two years for Cumberland Medical Center at Crossville, Tennessee, as head dietitian. Following a move to Knoxville, Tennessee, the author worked with the Emergency Food and Medical Services of the Community Action Committee. In 1972 she entered the Graduate School of The University of Tennessee to work toward a Master of Science degree in Nutrition.

The author is a member of the American Dietetic Association.

She is married to Landon Colvard, Jr.